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Remarks**I. PRELIMINARY REMARKS**

Claims 1-4, 8, 10-12, 15 and 17-20 have been amended. No claims have been added or canceled. Claims 1-26 remain in the application. Claims 4, 6, 7, 13, 14, 16 and 20-22 were withdrawn from consideration. Reexamination and reconsideration of the application, as amended, are respectfully requested.

Applicant notes with appreciation that the Office action indicated that claims 1, 8, 15, 17 and 23 are generic.

II. REJECTION UNDER 35 U.S.C. § 103**A. The Rejection**

Claims 1, 2, 3, 5, 8-12, 15, 17-19 and 23-26 were rejected under 35 U.S.C. § 103 as unpatentable over the combined teachings of Jog et al. (U.S. Patent Application Publication No. 2003/0083724) and Cosman (U.S. Patent No. 4,907,589). This rejection is respectfully traversed with respect to the claims 1, 2, 3, 5, 8-12, 15 and 17-19 as amended above, and claims 23-26 as originally filed. Reconsideration thereof is respectfully requested.

B. Discussion Concerning Claims 1, 2, 3, 5, 8-12 and 15

Independent claim 1 calls for a combination of elements comprising, *inter alia*, "**multiple temperature sensors** positioned to sense and report the temperature near the tissue receiving the lesioning current." The respective combinations defined by dependent claims 2, 3 and 5 include, *inter alia*, the elements recited in claim 1. Similarly, independent claim 8 calls for a combination of elements comprising, *inter alia*, "**multiple temperature sensors** that sense and report the temperature near the body tissue receiving the lesioning current." The respective combinations defined by dependent claims 9-12 include, *inter alia*, the elements recited in claim 8. Independent claim 15 includes a combination of elements comprising, *inter alia*, "means for sensing temperature created by lesioning, wherein the means for sensing includes **means for sensing temperature at multiple sites.**"

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The Jog publication and the Cosman patent, taken alone or together, fail to teach or suggest such combinations. As an initial matter and as pointed out in the Office action, the Jog et al. reference does not teach using even a single temperature sensor. The Cosman reference describes using only a single temperature sensor positioned at the lesioning electrode. For instance, in the Abstract of the patent, Cosman describes his invention as including "means to prevent **the electrode temperature** to exceed [sic] a set temperature point" (emphasis added). In the Background of the Invention, at column 1, lines 25-26, Cosman describes typical RF lesion generators as monitoring "[t]he **temperature of the lesion electrode**" (emphasis added). In the Description of the Invention, at column 2, lines 23-28, Cosman states "[a] **temperature sensor 8 in the tip of the electrode** measures the tissue temperature in the vicinity of the tip 3 and thus the degree of heating. This is a standard arrangement for radio frequency (RF) heating within the body that is common in neurosurgery" (emphasis added). Finally, Cosman claims an apparatus for "heating of biological bodily tissue by an electrode...**said electrode having a built-in temperature sensor**" (claim 1; emphasis added).

In one instance, at column 4, lines 34-37, Cosman states that "[t]he temperature sensors in the probe themselves can take varied forms; thermocouples, thermistors, thermosensor chips, integrated circuits, and other means." However, this sentence follows a listing of different power sources that one can choose from to heat the electrode, and in the same fashion, is describing different sensors that could be used *one at a time*, with the lesioning electrode. Indeed, as is clear from the passages above, and as shown in figure 1, the Cosman patent includes only one electrode (reference number 3), which is also the location of the sensor (reference number 8). There is no suggestion to use multiple lesioning electrodes, let alone multiple sensors. As such, the Cosman device does not teach or suggest "**multiple temperature sensors** positioned to sense and report the temperature near the tissue receiving the lesioning current" or "**means for sensing temperature at multiple sites.**"

As the Jog and Cosman references fail to teach or suggest each and every element of independent claims 1, 8 and 15, applicant respectfully submits that the rejection of claims 1, 2, 3, 5, 8-12 and 15 under 35 U.S.C. § 103 should be withdrawn.

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C. Discussion Concerning Claims 17-19

Independent claim 17 calls for a combination of steps comprising, *inter alia*, “sensing the temperature adjacent the tissue receiving current from the RF generator **and from at least one additional site along the brain stimulation lead**; and controlling lesion creation based on the sensed **temperatures**.” The respective combinations defined by dependent claims 18 and 19 include, *inter alia*, the elements recited in claim 17.

The Jog publication and the Cosman et al. patent, taken alone or together, fail to teach or suggest such a combination of steps. The Jog et al. reference does not teach or suggest any temperature sensing. The Cosman reference describes sensing at only one location – either “[t]he **temperature of the lesion electrode**” (column 1, lines 25-26; emphasis added) or “tissue temperature in the vicinity of the tip 3” using “[a] **temperature sensor 8 in the tip of the electrode**” (column 2, lines 23-28; emphasis added). The Cosman patent includes only one electrode (reference number 3), which is also the location of the one sensor (reference number 8). As Cosman fails to teach or suggest multiple electrodes or multiple sensors, he similarly fails to teach or suggest “sensing the temperature adjacent the tissue receiving current from the RF generator **and from at least one additional site along the brain stimulation lead**; and controlling lesion creation based on the sensed **temperatures**.”

As the Jog and Cosman references fail to teach or suggest each and every step in the combination defined by independent claim 17, applicant respectfully submits that the rejection of claims 17-19 under 35 U.S.C. § 103 should be withdrawn.

D. Discussion Concerning Claims 23-26

Independent claim 23 is directed to a method for creating a lesion in a patient's body, comprising:

- a) *implanting a lead in a patient's brain;*
- b) *electrically connecting the lead to an external RF generator;*
- c) *creating a lesion with the lead and the external RF generator;*
- d) *disconnecting the lead from the external RF generator;*

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- e) waiting at least one week;*
- f) evaluating the results of the lesion; and*
- g) repeating b) through f) at least once to create a progressive, graduated lesion.*

The Office action states that "Jog et al. disclose that the neural tissue of the target site is monitored over a period of chronic stimulation to adjust for changes." However, monitoring effects *during chronic stimulation* is not the same as, and does not suggest, evaluating *results of a lesion*, as claimed. In addition, the Examiner has not indicated where in the cited references the additional limitations set forth in claim 23 can be found. For instance, the Examiner has not shown where Jog or Cosman teach or suggest "waiting at least one week" after creating a lesion or "creat[ing] a progressive, graduated lesion" over a series of two or more lesion-creating sessions.

As the Jog and Cosman references fail to teach or suggest each and every step in the combination defined by independent claim 23, applicant respectfully submits that the rejection of claims 23-26 under 35 U.S.C. § 103 should be withdrawn.

III. CLOSING REMARKS

In view of the foregoing, it is respectfully submitted that the claims in the application are in condition for allowance. Reexamination and reconsideration of the application, as amended, are respectfully requested. Allowance of the claims at an early date is courteously solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is respectfully requested to call applicant's undersigned representative at (661) 362-1906 to discuss the steps necessary for placing the application in condition for allowance.

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The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 50-0648. Should such fees be associated with an extension of time, applicant respectfully requests that this paper be considered a petition therefor.

2006 Mar 10
Date

Please direct all written inquiries to:
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Respectfully Submitted,

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